ABSTRACT OF THE DISCLOSURE

Methods and apparatuses for color image restoration and enhancement. In at least one embodiment, color signals for individual channels of an image (e.g., red, green, or blue) are adjusted based on a weighted set of averages (e.g., of the entire image, the center portion, the surrounding portion, or other portions). In one example, pixels with extreme values of color signals (e.g., pure black or white pixels) are ignored for the purposes of restoring color; and, the different averages are weighted according to the pixel location (e.g., the distance from the pixel to a center point). In one example, after color restoration for individual channels, the luminance of each pixel is adjusted back to their original levels; and the range of luminance of the image is further adjusted to provide improved brightness and contrast, where in determining the luminance the red, green and blue color channels are given an equal weight.